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SECURITY DOCK POWER BUTTON

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Security Dock Power Button

Abstract: A security dock power button on a docking station prevents a user from turning on the docking station unless the user is the owner of the computer connected to the docking station.

This disclosure relates to the field of computer security.

A technique is disclosed that prevents the power button on a docking station from turning on a computer installed in the docking station unless the person who presses the button is the owner of the computer.

Docking stations for computers, such as notebook or tablet computers, can be used to power a computer installed in the dock, charge the computer's battery, and connect the computer to various peripheral devices and/or networks. Some USB-C alternate modes allow the power button on the dock to turn on the computer and system. However, the power button is not a security mechanism; any user can turn on the system using the power button on dock.

According to the present disclosure, and as understood with reference to the Figure, a docking station includes a security dock power button (SDPB). The system can't be turned on by dock power button when SDPB is enabled in the host and the user is not the owner for the host.

The SDPB includes an integrated fingerprint detector. In operation, at 10, the user presses the SDPB on the dock to turn on the system. The dock power button is controlled by the dock EC.

At 20, the fingerprint detector of the SDPB gets the user's fingerprint characteristic value (FCV). A specific vendor-defined message (VDM) is defined for the user's FCV. At 30, the fingerprint detector sends the FCV to the dock EC. At 40, the dock EC sends the FCV to the dock PD (Power Deliver).

The host PD (Power Deliver) and dock PD communicate the VDM on the USB-C interface. At 50, the dock PD sends the FCV to the host PD by PCM. At 60, the host PD sends the FCV to the host EC. At 70, the host EC compares the user's FCV with the host owner's FCV. At 80, if the two FCVs match, the host EC turns on the system; but if the 2 FCVs do not match, the host EC won't turn on the system.

SDPB capability is enabled or disabled by a setting in the host computer, not in the dock. A user can connect the host computer to a different dock without reconfiguring this security feature for the different dock.

The disclosed technique advantageously improves computer security by preventing the/a docking station to be turned on unless the user of the docking station is also the owner of for the host computer installed in the docking station.

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